

REMARKS

Claims 1-10 are pending in this application. By the Office Action, claims 1-10 are rejected under 35 U.S.C. §103(a) and provisionally rejected on the ground of nonstatutory obviousness-type double patenting. By this Amendment, claim 1 is amended.

In consideration of the following, reconsideration of the application is respectfully requested.

I. Rejections Under 35 U.S.C. §103

Claims 1-5 and 9-10 are rejected under 35 U.S.C. §103(a) over Japanese Publication No. 09-317452 (JPN '452) in view of WO 94/13937. Claims 1-6 and 9-10 are rejected under 35 U.S.C. §103(a) over JPN '452 in view of U.S. Patent No. 4,402,662 to Pfefferle (Pfefferle) or WO 99/64732. Claims 7 and 8 are rejected under 35 U.S.C. §103(a) over JPN '452 in view of Pfefferle or WO 99/64732 and further in view of U.S. Patent No. 4,203,502 to Strader (Strader). By this Amendment, claim 1 is amended. Applicants respectfully submit that the amended claim and the claims that depend therefrom overcome these rejections. Thus, Applicants respectfully traverse these rejections.

The Office Action concedes that JPN '452 fails to disclose that at least one of the cylinder-shaped supports has a ring-shaped cross-section with a cut-off and is disposed in the outer cylinder in such an elastically deformed state that it expands in the centrifugal direction. However, the Office Action asserts that WO 94/13937 discloses a support with a cut-off, such that when viewed in combination with JPN '452, would have rendered claim 1-5 and 9-10 obvious.

Although WO 94/13937 discloses a support with a cut-off, neither JPN '452 nor WO 94/13937 teaches or suggests a plurality of supports disposed in a circle having a peripheral length such that when the at least one of the cylinder-shaped supports is in elastically deformed state, the cylinder-shaped supports are inscribed in a circle having a diameter

inferior to an inside diameter of the outer cylinder, as claimed in independent claim 1.

Moreover, the assertion that the combination of JPN '452 and WO 94/13937 would have rendered the claimed invention obvious to one ordinarily skilled in the art is unreasonable.

The plurality of supports disposed in a circle having a peripheral length such that when at least one of the cylinder-shaped supports is in elastically deformed state, the cylinder-shaped supports are inscribed in a circle having a diameter inferior to an inside diameter of the outer cylinder is not even suggested by JPN '452 or WO 94/13937 or the combination thereof.

Nowhere does either reference teach or suggest that the combined teachings of the references could or should be modified to provide the claimed invention.

Further, the Office Action asserts that Pfefferle teaches a catalytic structure with a slot or "C" shaped slit cylinder configuration to provide a catalytic structure that can resist thermal shock. Although Pfefferle discloses a "C" shape, Pfefferle fails to disclose a cylinder-shaped support with a ring-shaped cross-section with a cut-off in an elastically deformed state. The Office Action also asserts that WO 99/64732 teaches the benefits of providing a compressible slotted cylinder 10 with perforations (page 5, lines 28-32) to facilitate in inserting into the exhaust pipe and the friction force exerted between the outer surface of slotted cylinder 10 and the inner surface of the exhaust pipe holds the slotted cylinder 10 in place (Figs. 2 and 4). However, a close examination of WO 99/64732 reveals that Figure 4 and page 5, lines 28-32 disclose not an outer compressible slotted cylinder 10 with perforations, but an inner support cylinder 30 with perforations. In contrast, Applicants are claiming a compressible slotted cylinder with perforations inside an outer cylinder. This is to say that the Applicant's compressible slotted cylinder with perforations corresponds with the WO 99/64732 cylinder 10, which lacks perforations, and not cylinder 30 as suggested by the Office Action. Finally, for the reasons stated above, JPN '452 fails to disclose that at least one of the cylinder-shaped

supports has a ring-shaped cross-section with a cut-off, and is disposed in the outer cylinder in such an elastically deformed state that it expands in the centrifugal direction.

Thus, neither JPN '452 nor WO 99/64732 nor WO 99/64732 anticipate the claimed invention and it is unreasonable to assert any of the above references alone, or in any combination, would have rendered the claimed invention obvious to one ordinarily skilled in the art.

Further yet, the Office Action asserts that the applied references (JPN '452, Pfefferle '662, and WO 99/64732) essentially disclose the claimed invention except for the feature of a plurality of cylinder support groups disposed in the outer cylinder at predetermined intervals in the axial direction and out of phase. To overcome this exception, the Office Action also asserts that Strader teaches a plurality of gas conduit groups and each group in each of the chambers A, B, and C are out of phase of each other, thereby allegedly rendering obvious the claimed invention. Foremost, Applicants do not concede that the applied references disclose the claimed invention. As such, neither the applied references in combination, or in any combination, in view of Strader can not possibly have rendered the claimed invention obvious. Secondly, even if the applied references essentially disclosed the claimed invention but for what Strader allegedly rendered obvious, Strader literally teaches chambers running in the longitudinal direction (col. 4, lines 1-10) and not the axial direction as claimed by applicants.

Thus, neither the applied references together, or in any combination, nor Strader anticipate the claimed invention and it is unreasonable to assert any of the above references alone, or in any combination, would have rendered the claimed invention obvious to one ordinarily skilled in the art.

For at least the reasons stated above, Applicants respectfully submit that amended claim 1 and all claims that depend therefrom overcome all of the 35 U.S.C. §103(a)

rejections. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

II. Obviousness-Type Double Patenting Rejection

The Office Action provisionally rejects claims 1-10 for obviousness-type double patenting over claims 1-2 and 5-11 of U.S. Patent Application No. 10/656,178. Applicants respectfully traverse this rejection.

Applicants respectfully submit that the cited claims of U.S. Patent Application No. 10/656,178 are broader than and would not have rendered obvious, the present claims. Instant independent claim 1 recites an outer cylinder within which supports are disposed. The claims of U.S. Patent Application No. 10/656,178 make no such reference. In fact, the claims of U.S. Patent Application No. 10/656,178 refer only to a mantle and do not specify what shapes, if any discernible shapes, apply. The Office Action asserts that "outer cylinder" and "mantle" are synonymous. However, not under any common usage in or outside the art can "outer cylinder" be read to be synonymous with "mantle". An "outer cylinder", as used in the instant application, is a thing defined by its shape or location. Quite differently, a mantle is a thing in of itself, undefined by any shape or location whatsoever.

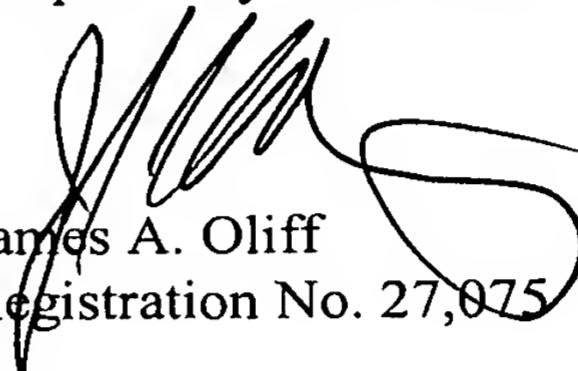
Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-10 is earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: November 29, 2006

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